



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

1.5 H D

D3407-1
Job Sheet 177180



Part No: D3407-1

Job Qty: 20 ea

Part Name: Stem



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 5/8/18

Job Tracking No:

Due Date: 6/15/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: IPP Rev:A 05.10.18 New issue KJ/EC IPP Rev:B Now on Doosan 08-05-14 JLM Verified By:DD IPP Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC IPP REV:D 17.11.02 AS PER DWG REV.G DD
VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	20 Ea		6/15/18	0.00	0.00	Start Up Machining-2		
100	Doosan	20 pcs		6/15/18	0.00	8.03	Doosan		
110	QC	20 pcs		6/15/18	0.00	0.00	QC2 Machining-2		
120	QC	20 pcs		6/15/18	0.00	0.00	QC8 Machining-2		
130	Packaging	20 pcs		6/15/18	0.00	0.00	Packaging3-1		
140	QC21-SA	20 Ea		6/15/18	0.00	0.00	QC21		

Part Op 100 - 1-Turn as per Folio FA596 Rev: ____ & Dwg D3407 Rev: ____ Mill slot width at max tolerance .260"
Descriptions: 130 - LOCATION: WA001

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M17-4-R0.750	17-4 Round Bar .750	9.1800 ft (.459 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M17-4-R0.750	9	16	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Tow Ring	0.063Inches ± 0.010	0.073 0.053	.068"	
2	Tow Ring	0.26520inches + 0.00160 - 0.00170	0.26680 0.26350	.2645	1/4-28 UNF
3	Tow Ring	0.24575inches ± 0.00325	0.24900 0.24250	.2468	Major
4	Tow Ring	0.625Inches ± 0.010	0.635 0.615	.6245	
5	Tow Ring	0.363Inches ± 0.010	0.373 0.353	.362	
6	Tow Ring	0.750Inches ± 0.010	0.760 0.740	.749	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

7	Tow Ring	0.100Inches ± 0.010	0.110 0.090	.100 Radius
8	Tow Ring	0.470Inches ± 0.010	0.480 0.460	.466
9	Tow Ring	0.500Inches ± 0.010	0.510 0.490	.495
10	Tow Ring	3.25Inches ± 0.01	3.26 3.24	3.258
11	Tow Ring	4.250Inches + 0.000 - 0.010	4.250 4.240	4.245"
12	Tow Ring	5.270Inches ± 0.010	5.280 5.260	5.27
13	Tow Ring	0.150Inches ± 0.010	0.160 0.140	.154
14	Tow Ring	0.550Inches ± 0.010	0.560 0.540	.554
15	Tow Ring	0.625Inches ± 0.010	0.635 0.615	.626
16	Tow Ring	0.250Inches + 0.010 - 0.000	0.260 0.250	.258

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DQA: _____ Date: _____

QA Closed: _____

Work Order: _____

Part No. _____

NCR No. _____

Date : _____



Work Order update only ☐

T DEPARTMENT/PROCESS

☐	☐	Water Jet	☐	Engineering	☐
☐	☐	Prod. Eng. Coord.	☐	Quality	☐
☐	☐	Rec/Store/Packaging	☐	Other	☐
☐	☐	Supplier	☐		☐

MRB (QSI042) Approval

Completed By

Lead hand / Supervisor
Approval Verification

QC / QA Coordinator
Approval

Part: D3407-1
Job No: 177180
Serial No/Batch: S099286
Revision: G
Inspector:
Exp Date:
Instructions: Various STC's

Date: 08/04/18



Container No: S099286
DART AEROSPACE
12710 Aberdeen Street
Hawthorn, VIC 3175
CANADA
Tel: 613 632-8200
Email: sales@dartaero.com
www.dartaerospace.com

Root Cause

Environment	☐	No Re-verification	☐
Design	☐	Operator	☐
Doc/Data	☐	Offset/Setup	☐
Equip/Tooling	☐	Supplier	☐
Handling/Pre	☐	Training	☐
Material	☐	Use for Testing	☐
Internal Transport	☐	Poor Information	☐
Tribal Knowledge	☐	Rushing	☐
LOA	☐	Product Improvement	☐
Substation	☐	Process Improvement	☐
Past Expiry Date	☐	Manufacturing Process	☐
Misidentified	☐	Past Due	☐

FAULT CATEGORY

☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
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☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence

OTHER :